

INTEGRATED PIPELINE PROJECT

MONTHLY EXECUTIVE SUMMARY

July 2016



IPL PROGRAM MANAGEMENT

Tarrant Regional Water District 804 East Northside Drive Fort Worth, TX 76102

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@IPL_Project

TARRANT REGIONAL WATER DISTRICT (TRWD) and the CITY OF DALLAS

WATER UTILITIES (DWU) have partnered to finance, plan, design, construct and operate the Integrated Pipeline (IPL) Project. The IPL Project is an integrated water delivery transmission system connecting Lake Palestine to Lake Benbrook with connections to Cedar Creek and Richland-Chambers Reservoirs integrating TRWD's existing pipelines and creating flexibility in delivery as well as quick response to fluctuating customer water demands. The IPL Project consists of 150 miles of pipeline, three new lake pump stations, and three new booster pump stations delivering a required capacity of 350 million gallons per day (MGD) of raw water to North Central Texas. TRWD and DWU currently serve over 4.1 million residents and the IPL will allow these agencies to continue supporting regional community and economic growth.

PROGRAM SUPPORT SERVICES

as of 07.31.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICE	EES	\$133,061,000	\$88,105,307	\$82,668,239
Program Management	Overall program management services for implementation of the IPL Project. (Extension of TRWD staff)	\$45,000,000	\$35,124,711	\$35,124,711
Conceptual Design / Environmental / Permitting	Operations plan & Prepare 404 permit application, Envision Application Completion	\$13,551,000	\$13,472,389	\$12,840,990
Value Engineering	Expert review of design	\$640,000	\$472,248	\$472,248
Surveying and Mapping	Control, property survey, legal descriptions, and Provide SUE Level A Survey, GIS	\$14,600,000	\$11,858,055	\$10,348,915
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,026,275	\$11,798,959
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$5,072,362	\$3,754,371
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,296,254
Studies		\$3,500,000	\$3,583,743	\$3,402,626
SCADA System	Engineering of SCADA system	\$640,000	\$1,508,213	\$160,554
Microwave System	Engineering of Communications System	\$5,210,000	\$1,522,785	\$1,468,609
DESIGN		\$152,839,000	\$128,231,192	\$110,312,990
Completed		\$101,901,000	\$96,376,989	\$95,153,466
Active		\$24,159,000	\$31,315,787	\$15,159,524
CH2M Hill	Project Operational Information and Operations Manual		\$3,044,922	\$1,486,486
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$2,563,376	\$480,094
мwн	Final Conformance of Design of Section 9/10/11	\$506,000	\$524,313	\$527,645
Black & Veatch	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch and 108 - inch pipeline		\$9,704,622	\$9,651,306
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,753	\$301,889
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$531,920
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$1,646,942
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$533,243
Remaining		\$24,778,000	\$538,417	
CONSTRUCTION ADMINISTRATION		\$48,877,000	\$17,801,451	\$6,645,773
CONSTRUCTION / OWNER FURNISHED E	QUIPMENT	\$1,729,540,000	\$486,872,380	\$310,380,600
Completed		\$3,700,000	\$3,860,755	\$3,644,051
Active		\$618,132,000	\$483,011,625	\$306,736,549
Pipeline Section 15-1	ipeline Section 15-1		\$93,682,440	\$92,286,252
Garney Construction	Construction of Section 15-1	\$115,112,000	\$93,682,440	\$92,286,252
IB3		\$99,592,000	\$85,376,536	\$32,278,243
MWH Constructors	Construction of JB3 Pump Station		\$56,854,737	\$15,185,494
ASI Constructors	Construction of JB3 Reservoir	\$16,579,000	\$11,669,898	\$11,669,898
Oncor Electric	Installation of JB3 Substation Transmission Lines	\$1,066,000	\$957,119	\$923,119
Isolux Corsan	Construction of JB3 Substation	\$7,400,000	\$4,921,283	\$3,485,745
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$10,973,499	\$1,013,988

PROGRAM SUPPORT SERVICES

as of 07.31.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,993,000	\$154,255,010	\$111,608,430
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$143,594,049	\$107,170,805
BAR Constructors	AR Constructors Construction of Richland-Chambers/Cedar Creek Interconnection Facility		\$10,572,961	\$4,437,624
Hilco Electric	Electric Relocation of Electrical Service Lines		\$88,000	
Microwave System		\$6,398,000	\$5,323,682	\$3,250,158
Huffman Communications	Construction of Microwave Towers	\$6,398,000	\$5,323,682	\$3,250,158
Pipeline Section 15-2		\$97,217,000	\$51,915,172	\$37,734,230
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$51,915,172	\$37,734,230
Pipeline Section 14		\$107,113,000	\$48,139,634	\$25,716,602
Garney Construction	Construction of Section 14	\$107,113,000	\$48,139,634	\$25,716,602
Pipeline Section 17 Tunnel		\$12,252,000	\$33,092,000	
IPL Partners	Construction of Section 17 Tunnel	\$12,252,000	\$33,092,000	\$0
Valve Packages		\$12,455,000	\$11,227,150	\$3,862,634
Garney Construction	Garney Construction Valve Package 1 - Section 15-1 Butterfly Valves		\$262,244	
Rodney Hunt	Valve Package 2 - Section 15-1 Interconnection Facility Valves	\$474,000	\$733,206	\$664,995
Blackhall Engineering	Valve Package 3 - JB3, Section 15-2, MBR Yard Gate Valves		\$6,211,276	\$2,110,111
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	\$0	\$2,269,140	\$352,962
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,224,944	\$382,561
Ross Valves	Valve Package 6 - Section 12 RC/CC Interconnection Multi-Orifice Valves	\$715,000	\$526,340	\$352,005
Remaining		\$1,107,708,000		
CONSTRUCTION MANAGEMENT		\$65,169,000	\$45,397,801	\$17,453,235
Completed		\$15,777,000	\$15,687,599	\$15,687,599
Active		\$17,665,000	\$29,710,201	\$1,765,636
Remaining		\$31,728,000		
CONSTRUCTION MATERIALS TESTING		\$17,295,000	\$10,495,125	\$2,770,144
Completed		\$203,000	\$225,133	\$225,132
Active		\$5,897,000	\$10,269,992	\$2,545,011
Remaining		\$11,196,000		
ROCIP		\$2,575,000	\$32,876,613	\$16,809,312
LAND COST		\$107,384,000	\$46,374,709	\$46,374,709
PROGRAM LEVEL CONTINGENCY	\$83,178,000			
MISCELLANEOUS		\$2,000,000	\$1,651,936	\$1,651,936
GRAND TOTAL		\$2,341,918,000	\$857,806,514	\$595,066,939
REMAINING BOND FUNDS				\$654,933,061

Note: Total Bonds issued to date \$1,250,000,000

ACCOMPLISHMENTS

through 08.31.16

PL15-1 (Pipeline Section 15-1 including the S5X15 Richland-Chambers Pipeline Interconnect Facility)

- Installed 78" BFV on discharge side of S5X15 Interconnect.
- Installed fencing and gates on sections A & C.
- Installed temporary piping for filling PL151 for hydrostatic testing.

JB3R (Pump Suction Reservoir for the JB3 Pump Station)

• No work by contractor this month.

PL12, 13, MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)

- Continue embankment fill for reservoir Cells 1, 2, and 3. Continue excavation for Cell 3 floor.
- Installing electrical, control and communication ductbanks at MBR.
- All pipe south of Mountain Creek is installed and JB4 Bypass pipe is installed.
- Began stripping topsoil on Section 12 and delivering pipe and aggregate along Section 12 ROW.
- Continue ROW grading and restoration and removal of excess spoil material.

COM01 (Microwave Towers and Communication Facilities for SCADA Control of the IPL)

- Performed inspections of JB3, JB4, S2X12, and JCC1 tower sites with design engineers.
- Received FCC license for towers at MBR and S5X15.

JB3 (250mgd Pump Station expandable to 350mgd)

- Completed pump pedestal concrete placements and Electrical Room floor slab.
- Continued installation of 108" YP-1 pump discharge yard piping.
- Continued installation of structural steel at Data Center building.

PL15-2 (Pipeline Section15-2 that feeds the JB3 Reservoir)

- Pipe crew #1 Installed 2,250' of 108" pipe to connection point at JB3; pipe crew #2 installed 450' of 108" pipe.
- Completed reinforced concrete encasement of pipe into and out of the Waxahachie Creek tunnel.
- Performed over-excavation and flowable fill backfill for foundation of 108" Gate Valve Vault.

S2X12 (Interconnection Facility of IPL Phase 1 to existing Cedar Creek and Richland Chambers Pipelines)

- Installed precast wall panels at Interconnect Building.
- Continue electrical ductbank installations.
- Crushed, segregated and recycled materials from old pipe that was replaced.

JB3HV (High Voltage Substation for the JB3 and Data Center)

- Completed installation of structural steel.
- Continue installing equipment and power/communication duct bank.
- Factory acceptance test of Control Building was completed.

PL14 (Pipeline Section 14 that delivers water from JB3 to MBR)

- Installed 2,800' of 108" pipe and completed pre-trenching an additional 3,100'.
- Completed pipe installation in tunnels at FM1494.
- Continue tunneling at IH35 53% complete, and under Enterprise and Energy Transfer gas lines – 99% complete.
- Continue receiving 108" pipe deliveries and stockpiling embedment material.
- Continue installing manholes at air release and blow-off valve locations and installing cathodic protection test stations

PL17TUN (Trinity River Tunnel on Pipeline Section 17)

- Contract was awarded to IPL Partners and the first two preconstruction workshops were held.
- IPL Net site is operational and submittal reviews have begun.

JCC1IN (Intake Structure and Wet Well for JCC1 Pump Station at Cedar Creek)

• Received Board authorization to award the contract to BAR Constructors.

PL10, 11 (Pipeline Sections 10 and 11 from the JB4 Pump Station to the KBR Pressure Reduction Facility)

 Received and evaluated five proposals with recommendation to be presented at September Board meeting.

OFE03 (Owner-Furnished 108" Gate Valves)

 IPL reps witnessed ultrasonic testing of castings at Greenville,
 Pennsylvania and Calera, Alabama. Casting inspections are complete on three of the five valves.

OFE04/05 (Owner-Furnished 54", 60" and 108" Butterfly Valves)

 IPL reps observed factory witness testing of two 108-inch butterfly valves. Valves are for installation at MBR site.

OFE07 (Owner-Furnished pumps, motors and variable frequency drives for JB3)

• IPL reps performed factory inspection of pump bowl lining.

OFE08 (Owner-Furnished 66", 84" and 108" Butterfly Valves)

 Received Board authorization for award of contract to Crispin Valves of Berwick, Pennsylvania.

OFE09 (Owner Furnished pumps, motors and variable frequency drives for JCC1)

 Issued Request for Proposals for seven vertical turbine pumps, motors and variable frequency drives

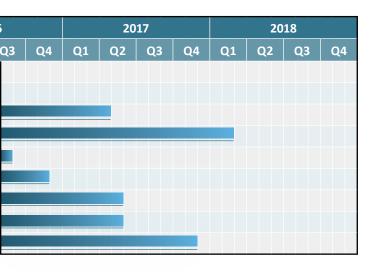
PROJECT SCHEDULE

PROJECT COMPONENTS		2014			2015				2016	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
SECTION 15-1 CONSTRUCTION										
COMMUNICATION TOWERS CONSTRUCTION										
SECTIONS 12/13/MBR CONSTRUCTION										
JB3 CONSTRUCTION										
JB3 HIGH VOLTAGE CONSTRUCTION										
SECTION 15-2 CONSTRUCTION										
SECTION 14 CONSTRUCTION										
S2X12 (INTERCONNECTION FACILITY) CONSTRUCTION										
SECTION 17 TUNNEL										

S2X12 Installing pre-cast wall panels at the S2X12 Interconnect facility

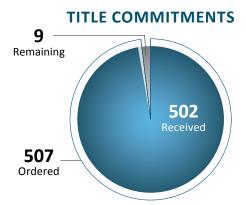


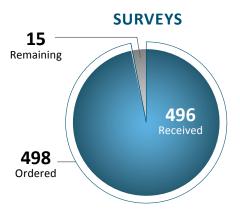
PL14 Installing pipe across Oak Branch Creek Tributary

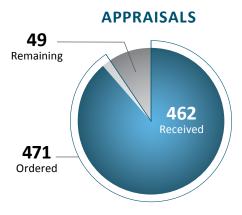


ACTIVITY STATUS

as of 08.31.16









M/WBE PARTICIPATION

as of 07.31.16

CONTRACT DESIGN	M/WBE & HUB SUB-	CONTRACT COMMITMI	NT	M/WBE H INVOICED 1		TOTAL PROJ COMPLETED DATE	
AND CONSTRUCTION	CONTRACTORS	\$	%	\$ (PER COMMITMENT)		\$	%
PROGRAM WIDE PROFESSIONA	L SERVICES	\$19,800,463	22%	\$19,443,246	98%	\$82,668,239	94%
Program Management		\$6,828,350	19%	\$6,636,687	97%	\$35,124,711	100%
Conceptual Design / Environmen	tal / Permitting	\$2,700,278	20%	\$2,732,998	101%	\$12,840,990	95%
Value Engineering		\$0	0%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,548,416	30%	\$3,802,298	107%	\$10,348,915	87%
Geotechnical		\$3,572,334	30%	\$3,518,305	98%	\$11,798,959	98%
Corrosion Engineering Services		\$1,053,764	21%	\$761,434	72%	\$3,754,371	74%
Land, Easement Acquisition, & Su	ipport	\$1,201,457	35%	\$1,476,614	123%	\$3,296,254	95%
Studies		\$41,717	1%	\$41,717	100%	\$3,402,626	95%
SCADA System		\$384,444	25%	\$360	0%	\$160,554	11%
Microwave System		\$469,702	31%	\$449,654	96%	\$1,468,609	96%
DESIGN		\$34,093,623	27%	\$29,737,469	87%	\$110,312,990	86%
Completed		\$26,511,305	28%	\$25,980,682	98%	\$95,153,466	99%
Active		\$7,582,319		\$3,756,787		\$15,159,524	48%
CH2M Hill (Ops Manual)	NDM	\$479,674	16%	\$335,406	70%	\$1,486,486	49%
CH2M Hill (JCC1)	CH2M Hill (JCC1) JQ, Gupta, APM, HVJ, XENCO		25%	\$104,501	16%	\$480,094	19%
MWH	Garzabury, Kevin Sloan	\$226,705	43%	\$131,102	58%	\$527,645	101%
Black & Veatch	BDS, CAS, JQ, TME	\$2,425,531	25%	\$2,577,758	108%	\$9,651,306	100%
Parsons	Criado, EPB, HVJ	\$144,938	25%	\$0	0%	\$301,889	52%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$112,482	6%	\$531,920	8%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$406,959	23%	\$1,646,942	24%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$88,578	55%	\$533,243	59%
Remaining		\$0	0%	\$0	0%	\$0	0%
CONSTRUCTION ADMINISTRATI	ION	\$4,438,107	25%	\$1,738,717	39%	\$6,645,773	37%
CONSTRUCTION / OWNER FURN	IISHED EQUIPMENT	\$67,596,624	24%*	\$36,467,761	54%	\$310,380,600	64%
Completed		\$1,354,402	35%	\$1,354,402	100%	\$3,644,051	94%
Active		\$66,242,222	23%*	\$35,113,359	53%	\$306,736,549	64%
Pipeline Section 15-1		\$9,415,226	29%*	\$6,501,990	69%	\$92,286,252	99%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,415,226	29%*	\$6,501,990	69%	\$92,286,252	99%
JB3		\$16,474,218	25%*	\$3,148,381	19%	\$32,278,243	38%
Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping		\$13,580,000	27%*	\$1,239,000	9%	\$15,185,494	27%
ASI Constructors	Champion Fuel, Desert Steel, Green Scaping	\$1,417,833	13%*	\$1,525,477	108%	\$11,669,898	100%

M/WBE PARTICIPATION

as of 07.31.16

CONTRACT DESIGN	M/WBE & HUB SUB-	CONTRACT	CONTRACT M/WBE HUB COMMITMENT INVOICED TO DATE		TOTAL PROJ COMPLETED DATE		
AND CONSTRUCTION	CONTRACTORS	\$	%	\$	% (PER COMMITMENT)	\$	%
Isolux Corsan	Dyna Grid	\$1,476,385	30%	\$383,905	26%	\$3,485,745	71%
Oncor Electric	\$0	0%	\$0	0%	\$923,119	96%	
Pentair Flow Technologies		\$0	0%	\$0	0%	\$1,013,988	9%
Pipeline Section 12/13/MBR/JB4	Bypass	\$22,054,002		\$12,666,904	57%	\$111,608,430	72%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,209,810	26%*	\$10,053,025	47%	\$107,170,805	75%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$844,192	8%	\$2,613,879	310%	\$4,437,624	42%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Microwave System		\$1,471,554	28%	\$988,826	67%	\$3,250,158	61%
Huffman Communications	Ricochet, Edwards, Chaffin Tower	\$1,471,554	28%	\$988,826	67%	\$3,250,158	61%
Pipeline Section 15-2		\$4,122,200	16%*	\$9,669,614	235%	\$37,734,230	73%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$4,122,200	16%	\$9,669,614	235%	\$37,734,230	73%
Pipeline Section 14		\$6,081,897	22%*	\$2,137,644	35%	\$25,716,602	53%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,081,897	22%	\$2,137,644	35%	\$25,716,602	53%
Pipeline Section 17 Tunnel		\$6,623,125		\$0		\$0	
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	\$6,623,125	24%	\$0	0%	\$0	0%
Valve Packages		\$0	0%	\$0	0%	\$3,862,634	34%
CONSTRUCTION MANAGEMEN	г	\$19,172,452	42%	\$6,795,295	35%	\$17,453,235	38%
Completed		\$6,488,069	41%	\$5,954,412	92%	\$15,687,599	100%
Active		\$12,684,383	43%	\$840,883	7%	\$1,765,636	
CONSTRUCTION MATERIALS TE	STING	\$5,028,945	48%	\$1,307,322	26%	\$2,770,144	26%
Completed		\$219,036	97%	\$219,036	100%	\$225,132	100%
Active		\$4,809,909	47%	\$1,088,286	23%	\$2,545,011	25%
ROCIP		\$1,499,307	5%	\$205,937	14%	\$16,809,312	51%
TOTAL		\$151,629,522	25%*	\$95,695,747	63%	\$547,040,294	68%
LAND COST				\$54,150		\$46,374,709	43%
MISCELLANEOUS						\$1,651,936	
GRAND TOTAL		\$151,629,522	25%*	\$95,749,897	63%	\$595,066,939	69%
	M/WBE/HUB Inve		\$95,749,897				
 Denotes participation percentage excluding cost of pipe and owner furnished equipment. 				Grand Total Invoi			,066,939
** This number exclude	* Exclusions Invo	iced	\$205	,139,732			
and land cost \$\$205,139,732.				MWBE %		24.56%	

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PROJECT COMPONENTS

PIPELINE SEGMENTS	CORE PROJECT	DESCRIPTION
Section 9		KBR Turn-Out Tee to existing Benbrook Connection Pipeline (10.6 mi. 84" dia. Pipe + 5 mi. 120" Tunnel)
Section 10	•	KBR Turn-Out Tee to KBR (2.4 mi. 84" dia. Pipe)
Section 11	•	JB4 to KBR Turn-Out Tee (10 mi. 84" dia. Pipe)
Section 12	•	JB4 to existing CC and RC Pipelines (2.2 mi. 108" dia. Pipe)
Section 13	•	MBR2 (Midlothian Balancing Reservoir) to JB4 (11 mi. 108" dia. Pipe)
Section 14	•	JB3 to MBR2 (Midlothian Balancing Reservoir) (14.9 mi. 108" dia. Pipe)
Section 15	•	JB2 to JB3 (28.5 mi 108" dia. Pipe)
Section 16		JRC1 (Joint Richland Chambers Lake Pump Station) to JB2 (12.3 mi. 96" dia. Pipe)
Section 17	•	Cedar Creek Connection to JB2 (11.2 mi. 108" dia. Pipe)
Section 18	•	JCC1 (Joint Cedar Creek Lake Pump Station) to Cedar Creek Connection (0.2 mi. 108" dia. Pipe)
Section 19		LP1 (Lake Palestine Pump Station) to Cedar Creek Connection (42.3 mi. 84" dia. Pipe)

PUMP STATIONS	CORE PROJECT	DESCRIPTION
Palestine Pump Station		150 mgd with new intake
Cedar Creek Pump Station	•	277 mgd with new intake
Richland Chambers Pump Station		250 mgd Ultimate Design Capacity
Booster Pump Stations		Two @ 347 mgd and one @ 197 mgd (♦ one 347 mgd station - JB3)

SUPPORT FACILITIES	CORE PROJECT	DESCRIPTION
Reservoirs		Three reservoirs (80 – 400 mgd) two for booster pump stations and one for balancing
Deep Tunnels		5 mi of 10' dia. tunnel @ Crowley (included in length of Section 9)
Substations & High Voltage Transmission Lines		Six substations and 4 mi. of high voltage transmission lines (two substations)
Microwave Communications and SCADA System	•	Provides remote operations capability and system monitoring

